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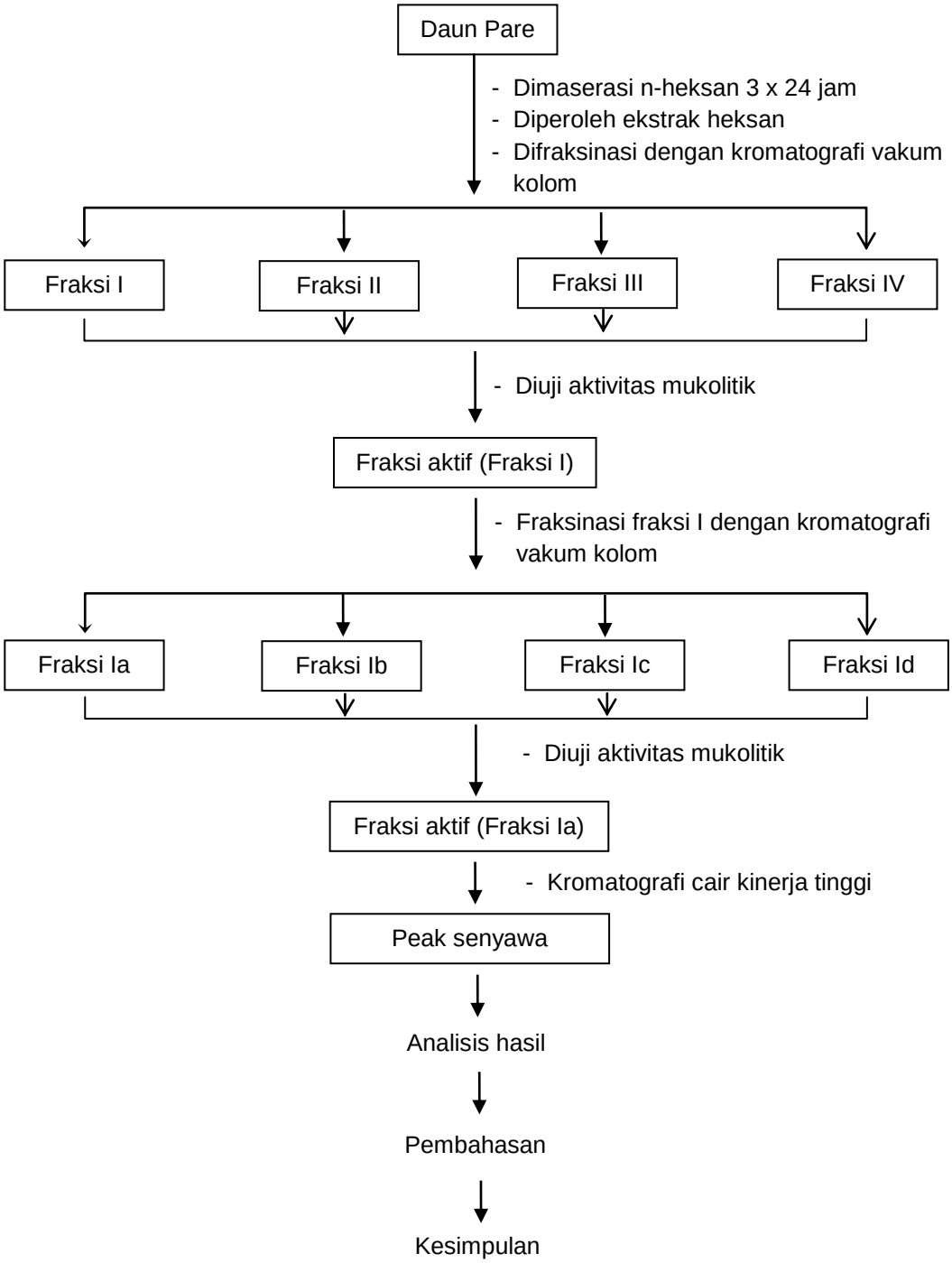
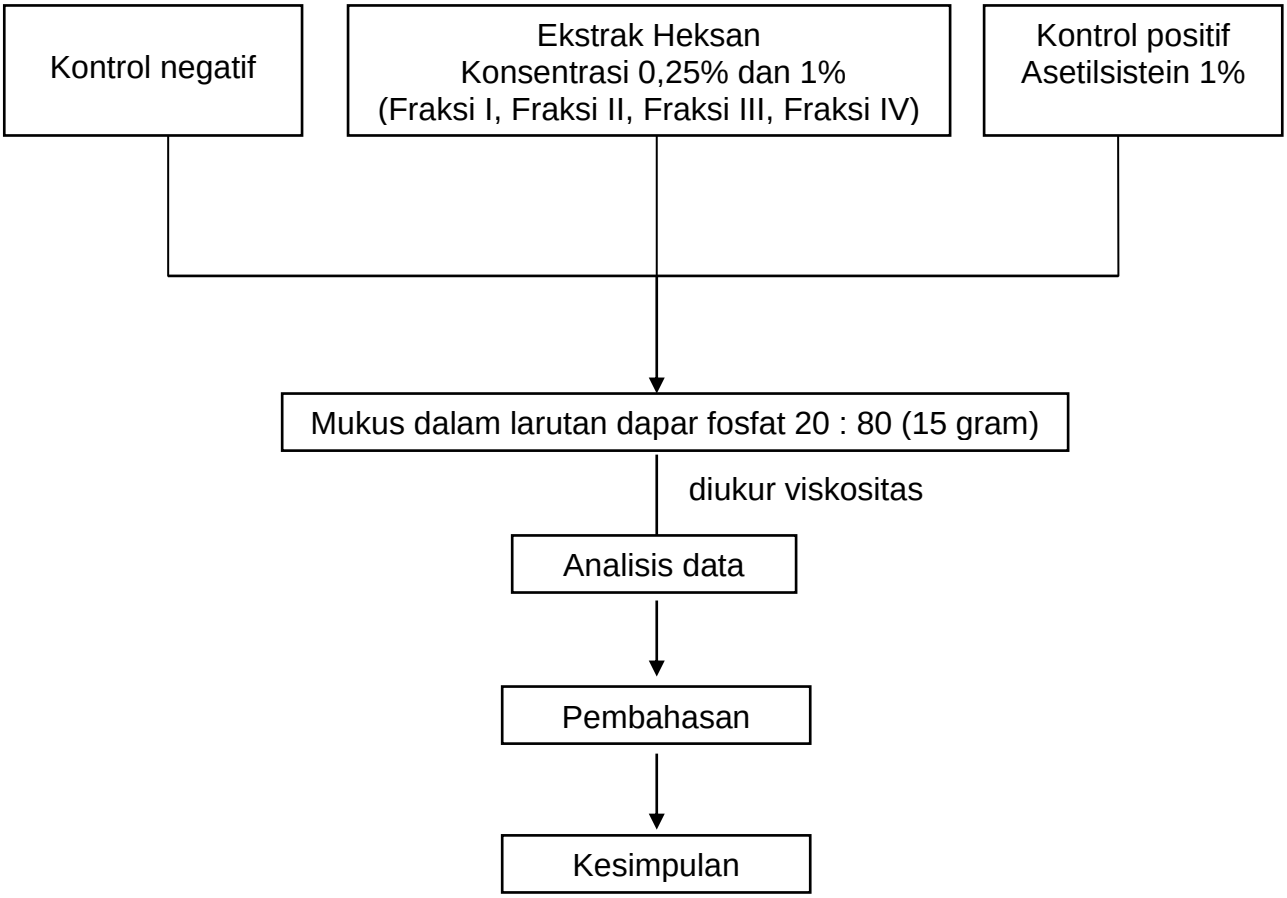
LAMPIRAN I

Skema Kerja



LAMPIRAN II

Skema Kerja Uji Aktivitas Mukolitik



LAMPIRAN III

Perhitungan aktivitas mukolitik secara *in vitro* (viskositas) ekstrak heksan daun pare (*Momordica charantia* L.)

Tabel 5. Data waktu alir uji aktivitas mukolitik fraksi Ekstrak heksan

No	Sampel Uji	Data Waktu Alir (detik)			
		1	2	3	Rata-rata
1	Fraksi I 0,25 %	10,17	10,84	10,44	10,48
2	Fraksi I 1 %	10,74	10,92	10,92	10,86
3	Fraksi II 0,25 %	14,23	14,62	13,81	14,22
4	Fraksi II 1 %	15,54	18,34	17,83	17,24
5	Fraksi III 0,25 %	15,72	13,80	16,36	15,29
6	Fraksi III 1 %	14,87	15,48	15,58	15,31
7	Fraksi IV 0,25 %	15,09	15,41	15,81	15,44
8	Fraksi IV 1 %	13,98	14,15	13,89	14,01
9	Kontrol +	10,01	9,70	9,70	9,80
10	Kontrol -	15,35	18,02	20,90	18,09
11	Air Suling	8,35	8,50	8,58	8,48

Tabel 6. Data bobot jenis larutan uji fraksi ekstrak heksan

No	Sampel Uji	Bobot Jenis Larutan (gram/ml)			
		1	2	3	Rata-rata
1	Fraksi I 0,25 %	1,093	1,004	1,095	1,064
2	Fraksi I 1 %	1,000	1,090	1,004	1,031
3	Fraksi II 0,25 %	1,041	1,094	1,043	1,059
4	Fraksi II 1 %	1,050	1,044	1,054	1,049
5	Fraksi III 0,25 %	1,051	1,038	1,054	1,048
6	Fraksi III 1 %	1,052	1,035	1,038	1,042
7	Fraksi IV 0,25 %	1,005	1,005	1,005	1,005
8	Fraksi IV 1 %	1,051	1,038	1,054	1,048
9	Kontrol +	1,040	1,044	1,045	1,043
10	Kontrol -	1,098	1,004	1,007	1,036
11	Air Suling	1,042	1,040	1,045	1,042

Perhitungan bobot jenis (BJ) air pada suhu 37^0C

$$\text{BJ} = \frac{\text{Bobot air (g)} - \text{bobot piknometer kosong (g)}}{\text{Volume piknometer rata-rata (ml)}}$$

$$= \frac{20{,}800\ g - 10{,}379\ g}{10\ ml} \qquad = 1{,}042$$

Bobot jenis air pada suhu 37^0C adalah 1,042.

Diketahui bobot piknometer kosong : I = 9,667 g

II = 10,379 g

Volume piknometer kosong : 10 ml

Perhitungan bobot jenis larutanr uji yang mengandung fraksi heksan

$$\text{Bobot jenis mukus } (37^0\text{C}) = \frac{Bobot\ mukus\ (g) - bobot\ piknometer\ kosong\ (g)}{Volume\ piknometer\ rata-rata\ (ml)}$$

Fraksi I 1%

$$\text{BJ} = \frac{\text{Bobot mukus (g)} - \text{bobot piknometer kosong (g)}}{\text{Volume piknometer rata-rata (ml)}}$$

$$\text{BJ} = \frac{19{,}669\ g - 9{,}667\ g}{10\ ml} \qquad = 1{,}000$$

$$\text{BJ} = \frac{21{,}277\ g - 10{,}379\ g}{10\ ml} \qquad = 1{,}090$$

$$\text{BJ} = \frac{19{,}708\ g - 9{,}667\ g}{10\ ml} \qquad = 1{,}004$$

Fraksi I 0,25%

$$\text{BJ} = \frac{21{,}306\ g - 10{,}379\ g}{10\ ml} = 1{,}093$$

$$\text{BJ} = \frac{19{,}710\ g - 9{,}667\ g}{10\ ml} = 1{,}004$$

$$\text{BJ} = \frac{21{,}324\ g - 10{,}379\ g}{10\ ml} = 1{,}095$$

Fraksi II 1%

$$\text{BJ} = \frac{20{,}879\ g - 10{,}379\ g}{10\ ml} = 1{,}050$$

$$\text{BJ} = \frac{20{,}110\ g - 9{,}667\ g}{10\ ml} = 1{,}044$$

$$\text{BJ} = \frac{20{,}916\ g - 10{,}379\ g}{10\ ml} = 1{,}054$$

Fraksi II 0,25%

$$\text{BJ} = \frac{20{,}072\ g - 9{,}667\ g}{10\ ml} = 1{,}041$$

$$\text{BJ} = \frac{21{,}319\ g - 10{,}379\ g}{10\ ml} = 1{,}094$$

$$\text{BJ} = \frac{20{,}098\ g - 9{,}667\ g}{10\ ml} = 1{,}043$$

Fraksi III 1%

$$\text{BJ} = \frac{20{,}900\ g - 10{,}379\ g}{10\ ml} = 1{,}052$$

$$\text{BJ} = \frac{20{,}013\ g - 9{,}667\ g}{10\ ml} = 1{,}035$$

$$\text{BJ} = \frac{20{,}045\ g - 9{,}667\ g}{10\ ml} = 1{,}038$$

Fraksi III 0,25%

$$\text{BJ} = \frac{20{,}886\ g - 10{,}379\ g}{10\ ml} = 1{,}051$$

$$\text{BJ} = \frac{20{,}042\ g - 9{,}667\ g}{10\ ml} = 1{,}038$$

$$\text{BJ} = \frac{20{,}918\ g - 10{,}379\ g}{10\ ml} = 1{,}054$$

Fraksi IV 1%

$$\text{BJ} = \frac{20{,}892\ g - 10{,}379\ g}{10\ ml} = 1{,}051$$

$$\text{BJ} = \frac{20{,}885\ g - 10{,}379\ g}{10\ ml} = 1{,}051$$

$$\text{BJ} = \frac{20{,}849\ g - 10{,}379\ g}{10\ ml} = 1{,}047$$

Fraksi IV 0,25%

$$\text{BJ} = \frac{19{,}720\ g - 9{,}667\ g}{10\ ml} = 1{,}005$$

$$\text{BJ} = \frac{19{,}718\ g - 9{,}667\ g}{10\ ml} = 1{,}005$$

$$\text{BJ} = \frac{19{,}714\ g - 9{,}667\ g}{10\ ml} = 1{,}005$$

Kontrol Positif

$$\text{BJ} = \frac{20{,}068\ g - 9{,}667\ g}{10\ ml} = 1{,}040$$

$$\text{BJ} = \frac{20{,}108\ g - 9{,}667\ g}{10\ ml} = 1{,}044$$

$$\text{BJ} = \frac{20{,}120\ g - 9{,}667\ g}{10\ ml} = 1{,}045$$

Kontrol Negatif

$$\text{BJ} = \frac{21{,}360\ g - 10{,}379\ g}{10\ ml} = 1{,}098$$

$$\text{BJ} = \frac{19{,}710\ g - 9{,}667\ g}{10\ ml} = 1{,}004$$

$$\text{BJ} = \frac{19{,}732\ g - 9{,}667\ g}{10\ ml} = 1{,}007$$

Perhitungan viskositas larutan uji pada suhu 37^{o}C

$$\eta \text{ mukus} = \frac{\rho \text{ larutan uji } 37°C \text{ x t larutan uji } 37°C}{\rho \text{ air } 37°C \text{ x t air } 37°C} \text{ x } \eta \text{ air } 37^{0}C$$

Diketahui :

η air pada suhu 37^{o}C = 0,692 cps

t air = 8,48 dtk

η Fraksi I 1%

$$\eta \text{ larutan uji} = \frac{1{,}000\ x\ 10{,}74}{1{,}042\ x\ 8{,}35} \text{ x } 0{,}692 = 0{,}854 \text{ cps}$$

$$\eta \text{ larutan uji} = \frac{1{,}090\ x\ 10{,}92}{1{,}040\ x\ 8{,}50} \text{ x } 0{,}692 = 0{,}931 \text{ cps}$$

$$\eta \text{ larutan uji} = \frac{1{,}004\ x\ 10{,}92}{1{,}045\ x\ 8{,}58} \text{ x } 0{,}692 = 0{,}846 \text{ cps}$$

η larutan uji rata-rata = 0,877 cps

η Fraksi I 0,25%

$$\eta \text{ larutan uji} = \frac{1{,}093\ x\ 10{,}17}{1{,}042\ x\ 8{,}35} \text{ x } 0{,}692 = 0{,}883 \text{ cps}$$

$$\eta \text{ larutan uji} = \frac{1{,}004\ x\ 10{,}84}{1{,}040\ x\ 8{,}50} \text{ x } 0{,}692 = 0{,}851 \text{ cps}$$

$$\eta \text{ larutan uji} = \frac{1{,}095\ x\ 10{,}44}{1{,}045\ x\ 8{,}58} \text{ x } 0{,}692 = 0{,}882 \text{ cps}$$

η larutan uji rata-rata = 0,872 cps

η Fraksi II 1%

$$\eta \text{ larutan uji} = \frac{1{,}050\ x\ 15{,}54}{1{,}042\ x\ 8{,}35} \text{ x } 0{,}692 = 1{,}297 \text{ cps}$$

$$\eta \text{ larutan uji} = \frac{1{,}044\ x\ 18{,}34}{1{,}040\ x\ 8{,}50} \text{ x } 0{,}692 = 1{,}498 \text{ cps}$$

$$\eta \text{ larutan uji} = \frac{1{,}054\ x\ 17{,}83}{1{,}045\ x\ 8{,}58} \text{ x } 0{,}692 = 1{,}449 \text{ cps}$$

η larutan uji rata-rata = 1,415 cps

η Fraksi II 0,25%

$$\eta \text{ larutan uji} = \frac{1{,}041\ x\ 14{,}23}{1{,}042\ x\ 8{,}35} \text{ x } 0{,}692 = 1{,}177 \text{ cps}$$

$$\eta \text{ larutan uji} = \frac{1{,}094\ x\ 14{,}62}{1{,}040\ x\ 8{,}50} \text{ x } 0{,}692 = 1{,}251 \text{ cps}$$

$$\eta \text{ larutan uji} = \frac{1{,}043\ x\ 13{,}81}{1{,}045\ x\ 8{,}58} \text{ x } 0{,}692 = 1{,}111 \text{ cps}$$

η larutan uji rata-rata = 1,180 cps

η Fraksi III 1%

$$\eta \text{ larutan uji} = \frac{1{,}052\ x\ 14{,}87}{1{,}042\ x\ 8{,}35} \text{ x } 0{,}692 = 1{,}243 \text{ cps}$$

$$\eta \text{ larutan uji} = \frac{1{,}035\ x\ 15{,}48}{1{,}040\ x\ 8{,}50} \text{ x } 0{,}692 = 1{,}253 \text{ cps}$$

$$\eta \text{ larutan uji} = \frac{1{,}038\ x\ 15{,}58}{1{,}045\ x\ 8{,}58} \text{ x } 0{,}692 = 1{,}247 \text{ cps}$$

η larutan uji rata-rata = 1,248 cps

η Fraksi III 0,25%

$$\eta \text{ larutan uji} = \frac{1{,}051\ x\ 15{,}72}{1{,}042\ x\ 8{,}35} \text{ x } 0{,}692 = 1{,}313 \text{ cps}$$

$$\eta \text{ larutan uji} = \frac{1{,}038\ x\ 13{,}80}{1{,}040\ x\ 8{,}50} \text{ x } 0{,}692 = 1{,}121 \text{ cps}$$

$$\eta \text{ larutan uji} = \frac{1{,}054\ x\ 16{,}36}{1{,}045\ x\ 8{,}58} \text{ x } 0{,}692 = 1{,}330 \text{ cps}$$

η larutan uji rata-rata = 1,254 cps

η Fraksi IV 1%

$$\eta \text{ larutan uji} = \frac{1{,}051\ x\ 13{,}98}{1{,}042\ x\ 8{,}35} \text{ x } 0{,}692 = 1{,}168 \text{ cps}$$

$$\eta \text{ larutan uji} = \frac{1{,}038\ x\ 14{,}15}{1{,}040\ x\ 8{,}50} \text{ x } 0{,}692 = 1{,}149 \text{ cps}$$

$$\eta \text{ larutan uji} = \frac{1{,}054\ x\ 13{,}89}{1{,}045\ x\ 8{,}58} \text{ x } 0{,}692 = 1{,}129 \text{ cps}$$

η larutan uji rata-rata = 1,149 cps

η Fraksi IV 0,25%

$$\eta \text{ larutan uji} = \frac{1{,}005\ x\ 15{,}09}{1{,}042\ x\ 8{,}35} \text{ x } 0{,}692 = 1{,}205 \text{ cps}$$

$$\eta \text{ larutan uji} = \frac{1{,}005\ x\ 15{,}41}{1{,}040\ x\ 8{,}50} \text{ x } 0{,}692 = 1{,}211 \text{ cps}$$

$$\eta \text{ larutan uji} = \frac{1{,}005\ x\ 15{,}81}{1{,}045\ x\ 8{,}58} \text{ x } 0{,}692 = 1{,}225 \text{ cps}$$

η larutan uji rata-rata = 1,214 cps

η Kontrol Positif

$$\eta \text{ larutan uji} = \frac{1{,}040\ x\ 10{,}01}{1{,}042\ x\ 8{,}35} \text{ x } 0{,}692 = 0{,}827 \text{ cps}$$

$$\eta \text{ larutan uji} = \frac{1{,}044\ x\ 9{,}70}{1{,}040\ x\ 8{,}50} \text{ x } 0{,}692 = 0{,}792 \text{ cps}$$

$$\eta \text{ larutan uji} = \frac{1{,}045\ x\ 9{,}70}{1{,}045\ x\ 8{,}58} \text{ x } 0{,}692 = 0{,}782 \text{ cps}$$

η larutan uji rata-rata = 0,800 cps

η Kontrol Negatif

$$\eta \text{ larutan uji} = \frac{1{,}098\ x\ 15{,}35}{1{,}042\ x\ 8{,}35} \text{ x } 0{,}692 = 1{,}340 \text{ cps}$$

$$\eta \text{ larutan uji} = \frac{1{,}004\ x\ 18{,}02}{1{,}040\ x\ 8{,}50} \text{ x } 0{,}692 = 1{,}415 \text{ cps}$$

$$\eta \text{ larutan uji} = \frac{1{,}007\ x\ 20{,}90}{1{,}045\ x\ 8{,}58} \text{ x } 0{,}692 = 1{,}623 \text{ cps}$$

η larutan uji rata-rata = 1,459 cps

Tabel 7. Data waktu alir uji aktivitas mukolitik fraksi I Ekstrak heksan

No	Sampel Uji	Data Waktu Alir (detik)			
		1	2	3	Rata-rata
1	Subfraksi Ia 0,25 %	10,45	10,47	10,41	10,44
2	Subfraksi Ia 1 %	10,77	10,67	10,30	10,58
3	Subfraksi Ib 0,25 %	13,71	13,64	13,62	13,66
4	Subfraksi Ib 1 %	13,66	13,67	13,63	13,65
5	Subfraksi Ic 0,25 %	15,06	15,51	14,65	15,07
6	Subfraksi Ic 1 %	12,74	15,15	15,62	14,50
7	Subfraksi Id 0,25 %	12,68	13,38	13,51	13,19
8	Subfraksi Id 1 %	14,90	14,00	14,61	14,50
9	Kontrol +	10,77	10,52	10,89	10,73
10	Kontrol -	15,47	15,43	15,25	15,38
11	Air Suling	8,34	8,65	8,66	8,55

Tabel 8. Data bobot jenis larutan uji fraksi I ekstrak heksan

No	Sampel Uji	Bobot Jenis Larutan (gram/ml)			
		1	2	3	Rata-rata
1	Subfraksi Ia 0,25 %	1,091	1,001	1,092	1,061
2	Subfraksi Ia 1 %	1,003	1,090	1,049	1,047
3	Subfraksi Ib 0,25 %	1,000	1,092	1,004	1,032
4	Subfraksi Ib 1 %	1,091	0,999	1,090	1,060
5	Subfraksi Ic 0,25 %	1,046	1,047	1,051	1,048
6	Subfraksi Ic 1 %	1,041	1,049	1,042	1,044
7	Subfraksi Id 0,25 %	1,044	1,040	0,959	1,014
8	Subfraksi Id 1 %	1,039	1,039	1,039	1,039
9	Kontrol +	1,046	1,051	1,043	1,047
10	Kontrol -	1,001	1,091	1,040	1,044
11	Air Suling	1,041	1,031	1,042	1,038

Perhitungan bobot jenis (BJ) air pada suhu 37^0C

$$\text{BJ} = \frac{\text{Bobot air (g)} - \text{bobot piknometer kosong (g)}}{\text{Volume piknometer rata-rata (ml)}}$$

$$= \frac{20{,}537\ g - 10{,}394\ g}{10\ ml} \qquad = 1{,}014$$

Bobot jenis air pada suhu 37^0C adalah 1,042.

Diketahui bobot piknometer kosong : I = 9,683 g

II = 10,394 g

Volume piknometer kosong : 10 ml

Perhitungan bobot jenis larutanr uji yang mengandung fraksi heksan

$$\text{Bobot jenis mukus } (37^0\text{C}) = \frac{Bobot\ mukus\ (g) - bobot\ piknometer\ kosong\ (g)}{Volume\ piknometer\ rata-rata\ (ml)}$$

Subfraksi Ia 1%

$$\text{BJ} = \frac{\text{Bobot mukus (g)} - \text{bobot piknometer kosong (g)}}{\text{Volume piknometer rata} - \text{rata (ml)}}$$

$$\text{BJ} = \frac{19{,}714\ g - 9{,}683\ g}{10\ ml} = 1{,}003$$

$$\text{BJ} = \frac{21{,}295 g - 10{,}394\ g}{10\ ml} = 1{,}090$$

$$\text{BJ} = \frac{20{,}882\ g - 10{,}394\ g}{10\ ml} = 1{,}049$$

Subfraksi Ia 0,25%

$$\text{BJ} = \frac{21{,}301\ g - 10{,}394\ g}{10\ ml} = 1{,}091$$

$$\text{BJ} = \frac{19{,}688\ g - 9{,}683\ g}{10\ ml} = 1{,}001$$

$$\text{BJ} = \frac{21{,}313\ g - 10{,}394\ g}{10\ ml} = 1{,}092$$

Subfraksi Ib 1%

$$\text{BJ} = \frac{21{,}304\ g - 10{,}394\ g}{10\ ml} = 1{,}091$$

$$\text{BJ} = \frac{19{,}673\ g - 9{,}683\ g}{10\ ml} = 0{,}999$$

$$\text{BJ} = \frac{21{,}292\ g - 10{,}394\ g}{10\ ml} = 1{,}090$$

Subfraksi Ib 0,25%

$$\text{BJ} = \frac{19{,}679\ g - 9{,}683\ g}{10\ ml} = 1{,}000$$

$$\text{BJ} = \frac{21{,}313\ g - 10{,}394\ g}{10\ ml} = 1{,}092$$

$$\text{BJ} = \frac{19{,}725\ g - 9{,}683\ g}{10\ ml} = 1{,}004$$

Subfraksi Ic 1%

$$\text{BJ} = \frac{20{,}097\ g - 9{,}683\ g}{10\ ml} = 1{,}041$$

$$\text{BJ} = \frac{20{,}879\ g - 10{,}394\ g}{10\ ml} = 1{,}049$$

$$\text{BJ} = \frac{20{,}107\ g - 9{,}683\ g}{10\ ml} = 1{,}042$$

Subfraksi Ic 0,25%

$$\text{BJ} = \frac{20{,}853\ g - 10{,}394\ g}{10\ ml} = 1{,}046$$

$$\text{BJ} = \frac{20{,}151\ g - 9{,}683\ g}{10\ ml} = 1{,}047$$

$$\text{BJ} = \frac{20{,}900\ g - 10{,}394\ g}{10\ ml} = 1{,}051$$

Subfraksi Id 1%

$$\text{BJ} = \frac{20{,}075\ g - 9{,}683\ g}{10\ ml} = 1{,}039$$

$$\text{BJ} = \frac{20{,}073\ g - 9{,}683\ g}{10\ ml} = 1{,}039$$

$$\text{BJ} = \frac{20{,}072\ g - 9{,}683\ g}{10\ ml} = 1{,}039$$

Subfraksi Id 0,25%

$$\text{BJ} = \frac{20{,}833\ g - 10{,}394\ g}{10\ ml} = 1{,}044$$

$$\text{BJ} = \frac{20{,}795\ g - 10{,}394\ g}{10\ ml} = 1{,}040$$

$$\text{BJ} = \frac{19{,}985\ g - 10{,}394\ g}{10\ ml} = 0{,}959$$

Kontrol Positif

$$\text{BJ} = \frac{20{,}143\ g - 9{,}683\ g}{10\ ml} = 1{,}046$$

$$\text{BJ} = \frac{20{,}908\ g - 10{,}394\ g}{10\ ml} = 1{,}051$$

$$\text{BJ} = \frac{20{,}112\ g - 9{,}683\ g}{10\ ml} = 1{,}043$$

Kontrol Negatif

$$\text{BJ} = \frac{19{,}689\ g - 9{,}683\ g}{10\ ml} = 1{,}001$$

$$\text{BJ} = \frac{21{,}308\ g - 10{,}394\ g}{10\ ml} = 1{,}091$$

$$\text{BJ} = \frac{20{,}080\ g - 9{,}683\ g}{10\ ml} = 1{,}040$$

Air

$$\text{BJ} = \frac{20{,}806\ g - 10{,}394\ g}{10\ ml} = 1{,}041$$

$$\text{BJ} = \frac{19{,}989\ g - 9{,}683\ g}{10\ ml} = 1{,}031$$

$$\text{BJ} = \frac{20{,}816\ g - 10{,}394\ g}{10\ ml} = 1{,}042$$

Perhitungan viskositas larutan uji pada suhu 37^{o}C

$$\eta \text{ mukus} = \frac{\rho \text{ larutan uji } 37°\text{C} \times t \text{ larutan uji } 37°\text{C}}{\rho \text{ air } 37°\text{C} \times t \text{ air } 37°\text{C}} \times \eta \text{ air } 37^{o}\text{C}$$

Diketahui :

η air pada suhu 37^{o}C = 0,692 cps

t air = 8,55 dtk

η Subfraksi Ia 1%

$$\eta \text{ larutan uji} = \frac{1{,}003\ x\ 10{,}77}{1{,}041\ x\ 8{,}34} \text{ x } 0{,}692 = 0{,}861 \text{ cps}$$

$$\eta \text{ larutan uji} = \frac{1{,}090\ x\ 10{,}67}{1{,}031\ x\ 8{,}65} \text{ x } 0{,}692 = 0{,}902 \text{ cps}$$

$$\eta \text{ larutan uji} = \frac{1{,}049\ x\ 10{,}30}{1{,}042\ x\ 8{,}66} \text{ x } 0{,}692 = 0{,}829 \text{ cps}$$

η larutan uji rata-rata = 0,864 cps

η Subfraksi Ia 0,25%

$$\eta \text{ larutan uji} = \frac{1{,}091\ x\ 10{,}45}{1{,}041\ x\ 8{,}34} \text{ x } 0{,}692 = 0{,}909 \text{ cps}$$

$$\eta \text{ larutan uji} = \frac{1{,}001\ x\ 10{,}47}{1{,}031\ x\ 8{,}65} \text{ x } 0{,}692 = 0{,}813 \text{ cps}$$

$$\text{η larutan uji} = \frac{1{,}092\ x\ 10{,}41}{1{,}042\ x\ 8{,}66} \text{ x } 0{,}692 = 0{,}872 \text{ cps}$$

η larutan uji rata-rata = 0,865 cps

η Subfraksi Ib 1%

$$\text{η larutan uji} = \frac{1{,}091\ x\ 13{,}66}{1{,}041\ x\ 8{,}34} \text{ x } 0{,}692 = 1{,}188 \text{ cps}$$

$$\text{η larutan uji} = \frac{0{,}999\ x\ 13{,}67}{1{,}031\ x\ 8{,}65} \text{ x } 0{,}692 = 1{,}060 \text{ cps}$$

$$\text{η larutan uji} = \frac{1{,}090\ x\ 13{,}63}{1{,}042\ x\ 8{,}66} \text{ x } 0{,}692 = 1{,}139 \text{ cps}$$

η larutan uji rata-rata = 1,129 cps

η Subfraksi Ib 0,25%

$$\text{η larutan uji} = \frac{1{,}000\ x\ 13{,}71}{1{,}041\ x\ 8{,}34} \text{ x } 0{,}692 = 1{,}093 \text{ cps}$$

$$\text{η larutan uji} = \frac{1{,}092\ x\ 13{,}64}{1{,}031\ x\ 8{,}65} \text{ x } 0{,}692 = 1{,}156 \text{ cps}$$

$$\text{η larutan uji} = \frac{1{,}004\ x\ 13{,}62}{1{,}042\ x\ 8{,}66} \text{ x } 0{,}692 = 1{,}049 \text{ cps}$$

η larutan uji rata-rata = 1,099 cps

η Subfraksi Ic 1%

$$\text{η larutan uji} = \frac{1{,}041\ x\ 12{,}74}{1{,}041\ x\ 8{,}34} \text{ x } 0{,}692 = 1{,}057 \text{ cps}$$

$$\text{η larutan uji} = \frac{1{,}049\ x\ 15{,}15}{1{,}031\ x\ 8{,}65} \text{ x } 0{,}692 = 1{,}233 \text{ cps}$$

$$\text{η larutan uji} = \frac{1{,}042\ x\ 15{,}62}{1{,}042\ x\ 8{,}66} \text{ x } 0{,}692 = 1{,}248 \text{ cps}$$

η larutan uji rata-rata = 1,179 cps

η Subfraksi Ic 0,25%

$$\text{η larutan uji} = \frac{1{,}046\ x\ 15{,}06}{1{,}041\ x\ 8{,}34} \text{ x } 0{,}692 = 1{,}256 \text{ cps}$$

$$\text{η larutan uji} = \frac{1{,}047\ x\ 15{,}51}{1{,}031\ x\ 8{,}65} \text{ x } 0{,}692 = 1{,}260 \text{ cps}$$

$$\text{η larutan uji} = \frac{1{,}051\ x\ 14{,}65}{1{,}042\ x\ 8{,}66} \text{ x } 0{,}692 = 1{,}181 \text{ cps}$$

η larutan uji rata-rata = 1,232 cps

η Subfraksi Id 1%

$$\text{η larutan uji} = \frac{1{,}039\ x\ 14{,}90}{1{,}041\ x\ 8{,}34} \text{ x } 0{,}692 = 1{,}234 \text{ cps}$$

$$\text{η larutan uji} = \frac{1{,}039\ x\ 14{,}00}{1{,}031\ x\ 8{,}65} \text{ x } 0{,}692 = 1{,}129 \text{ cps}$$

$$\text{η larutan uji} = \frac{1{,}039\ x\ 14{,}61}{1{,}042\ x\ 8{,}66} \text{ x } 0{,}692 = 1{,}164 \text{ cps}$$

η larutan uji rata-rata = 1,176 cps

η Subfraksi Id 0,25%

$$\text{η larutan uji} = \frac{1{,}044\ x\ 12{,}688}{1{,}041\ x\ 8{,}34} \text{ x } 0{,}692 = 1{,}055 \text{ cps}$$

$$\text{η larutan uji} = \frac{1{,}040\ x\ 13{,}38}{1{,}031\ x\ 8{,}65} \text{ x } 0{,}692 = 1{,}080 \text{ cps}$$

$$\text{η larutan uji} = \frac{0{,}959\ x\ 13{,}51}{1{,}042\ x\ 8{,}66} \text{ x } 0{,}692 = 0{,}994 \text{ cps}$$

η larutan uji rata-rata = 1,043 cps

η Kontrol Positif

$$\text{η larutan uji} = \frac{1{,}046\ x\ 10{,}77}{1{,}041\ x\ 8{,}34} \text{ x } 0{,}692 = 0{,}898 \text{ cps}$$

$$\text{η larutan uji} = \frac{1{,}051\ x\ 10{,}52}{1{,}031\ x\ 8{,}65} \text{ x } 0{,}692 = 0{,}858 \text{ cps}$$

$$\text{η larutan uji} = \frac{1{,}043\ x\ 10{,}89}{1{,}042\ x\ 8{,}66} \text{ x } 0{,}692 = 0{,}871 \text{ cps}$$

η larutan uji rata-rata = 0,876 cps

η Kontrol Negatif

$$\text{η larutan uji} = \frac{1{,}001\ x\ 15{,}47}{1{,}041\ x\ 8{,}34} \text{ x } 0{,}692 = 1{,}234 \text{ cps}$$

$$\text{η larutan uji} = \frac{1{,}091\ x\ 15{,}43}{1{,}031\ x\ 8{,}65} \text{ x } 0{,}692 = 1{,}306 \text{ cps}$$

$$\text{η larutan uji} = \frac{1{,}040\ x\ 15{,}25}{1{,}042\ x\ 8{,}66} \text{ x } 0{,}692 = 1{,}216 \text{ cps}$$

η larutan uji rata-rata = 1,252 cps

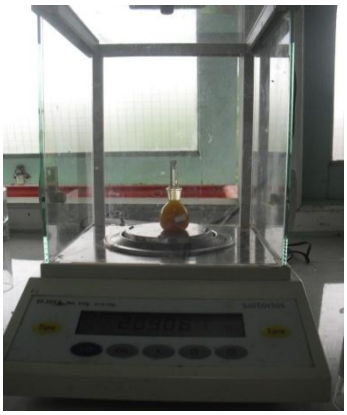
LAMPIRAN IV

FOTO PENGUJIAN

(a)

(b)

(c)



(d)

Keterangan: (a) Usus sapi , (b) Pengukuran waktu alir dengan viskometer Ostwald, (c) Sampel uji, (d) Pengukuran bobot jenis.

LAMPIRAN V

ANALISIS DATA

Analisis Data Ekstrak Heksan

Tests of Normality

	Sampel	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Viskositas	Kontrol Positif	.304	3	.	.907	3	.407
	Kontrol Negatif	.285	3	.	.931	3	.494
	F I 1%	.355	3	.	.820	3	.163
	F I 0.25%	.375	3	.	.773	3	.052
	F II 1%	.295	3	.	.920	3	.451
	F II 0.25%	.182	3	.	.999	3	.937
	F III 1%	.219	3	.	.987	3	.780
	F III 0.25%	.359	3	.	.811	3	.140
	F IV 1%	.177	3	.	1.000	3	.972
	F IV 0.25%	.269	3	.	.949	3	.567

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

Viskositas

Levene Statistic	df1	df2	Sig.
4.812	9	20	.002

Ranks

		N	Mean Rank	Sum of Ranks
Viskositas - Sampel	Negative Ranks	30[a]	15.50	465.00
	Positive Ranks	0[b]	.00	.00
	Ties	0[c]		
	Total	30		

a. Viskositas < Sampel

b. Viskositas > Sampel

c. Viskositas = Sampel

Analisis Data Fraksi I

Tests of Normality

	Sampel	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Viskositas	Kontrol Positif	.257	3	.	.961	3	.619
	Kontrol Negatif	.314	3	.	.893	3	.363
	F I 1 1%	.199	3	.	.995	3	.864
	F I 1 0.25%	.227	3	.	.983	3	.749
	F I 2 1%	.228	3	.	.982	3	.743
	F I 2 0.25%	.214	3	.	.990	3	.805
	F I 3 1%	.360	3	.	.809	3	.135
	F I 3 0.25%	.369	3	.	.788	3	.086
	F I 4 1%	.253	3	.	.964	3	.637
	F I 4 0.25%	.274	3	.	.945	3	.547

a. Lilliefors Significance Correction

Test of Homogeneity of Variances

Viskositas

Levene Statistic	df1	df2	Sig.
1.625	9	20	.175

Viskositas

Tukey HSD

Sampel	N	Subset for alpha = 0.05		
		1	2	3
F I 1 1%	3	.86400		
F I 1 0.25%	3	.86467		
Kontrol Positif	3	.87567		
F I 4 0.25%	3		1.04300	
F I 2 0.25%	3		1.09933	1.09933
F I 2 1%	3		1.12900	1.12900
F I 4 1%	3		1.17567	1.17567
F I 3 1%	3		1.17933	1.17933
F I 3 0.25%	3			1.23233
Kontrol Negatif	3			1.25200
Sig.		1.000	.149	.076

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3.000.

(I) Sampel		Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Kontrol Positif	Kontrol Negatif	-.376333*	.045831	.000	-.53863	-.21404
	F_Ia 1%	.011667	.045831	1.000	-.15063	.17396
	F_Ia 0.25%	.011000	.045831	1.000	-.15129	.17329
	F_Ib 1%	-.253333*	.045831	.001	-.41563	-.09104
	F_Ib 0.25%	-.223667*	.045831	.003	-.38596	-.06137
	F_Ic 1%	-.303667*	.045831	.000	-.46596	-.14137
	F_Ic 0.25%	-.356667*	.045831	.000	-.51896	-.19437
	F_Id 1%	-.300000*	.045831	.000	-.46229	-.13771
	F_Id 0.25%	-.167333*	.045831	.040	-.32963	-.00504
Kontrol Negatif	Kontrol Positif	.376333*	.045831	.000	.21404	.53863
	F_Ia 1%	.388000*	.045831	.000	.22571	.55029
	F_Ia 0.25%	.387333*	.045831	.000	.22504	.54963
	F_Ib 1%	.123000	.045831	.244	-.03929	.28529
	F_Ib 0.25%	.152667	.045831	.076	-.00963	.31496
	F_Ic 1%	.072667	.045831	.840	-.08963	.23496
	F_Ic 0.25%	.019667	.045831	1.000	-.14263	.18196
	F_Id 1%	.076333	.045831	.801	-.08596	.23863
	F_Id 0.25%	.209000*	.045831	.006	.04671	.37129

F_Ia 1%	Kontrol Positif	-.011667	.045831	1.000	-.17396	.15063
	Kontrol Negatif	-.388000*	.045831	.000	-.55029	-.22571
	F_Ia 0.25%	-.000667	.045831	1.000	-.16296	.16163
	F_Ib 1%	-.265000*	.045831	.000	-.42729	-.10271
	F_Ib 0.25%	-.235333*	.045831	.002	-.39763	-.07304
	F_Ic 1%	-.315333*	.045831	.000	-.47763	-.15304
	F_Ic 0.25%	-.368333*	.045831	.000	-.53063	-.20604
	F_Id 1%	-.311667*	.045831	.000	-.47396	-.14937
	F_Id 0.25%	-.179000*	.045831	.023	-.34129	-.01671

F_Ia 0.25%	Kontrol Positif	-.011000	.045831	1.000	-.17329	.15129
	Kontrol Negatif	-.387333*	.045831	.000	-.54963	-.22504
	F_Ia 1%	.000667	.045831	1.000	-.16163	.16296
	F_Ib 1%	-.264333*	.045831	.000	-.42663	-.10204
	F_Ib 0.25%	-.234667*	.045831	.002	-.39696	-.07237
	F_Ic 1%	-.314667*	.045831	.000	-.47696	-.15237
	F_Ic 0.25%	-.367667*	.045831	.000	-.52996	-.20537
	F_Id 1%	-.311000*	.045831	.000	-.47329	-.14871
	F_Id 0.25%	-.178333*	.045831	.024	-.34063	-.01604

F_Ib 1%	Kontrol Positif	.253333*	.045831	.001	.09104	.41563
	Kontrol Negatif	-.123000	.045831	.244	-.28529	.03929
	F_Ia 1%	.265000*	.045831	.000	.10271	.42729
	F_Ia 0.25%	.264333*	.045831	.000	.10204	.42663
	F_Ib 0.25%	.029667	.045831	1.000	-.13263	.19196
	F_Ic 1%	-.050333	.045831	.979	-.21263	.11196
	F_Ic 0.25%	-.103333	.045831	.455	-.26563	.05896
	F_Id 1%	-.046667	.045831	.987	-.20896	.11563
	F_Id 0.25%	.086000	.045831	.683	-.07629	.24829

F_Ib 0.25%	Kontrol Positif	.223667*	.045831	.003	.06137	.38596
	Kontrol Negatif	-.152667	.045831	.076	-.31496	.00963
	F_Ia 1%	.235333*	.045831	.002	.07304	.39763
	F_Ia 0.25%	.234667*	.045831	.002	.07237	.39696
	F_Ib 1%	-.029667	.045831	1.000	-.19196	.13263
	F_Ic 1%	-.080000	.045831	.759	-.24229	.08229
	F_Ic 0.25%	-.133000	.045831	.169	-.29529	.02929
	F_Id 1%	-.076333	.045831	.801	-.23863	.08596
	F_Id 0.25%	.056333	.045831	.958	-.10596	.21863

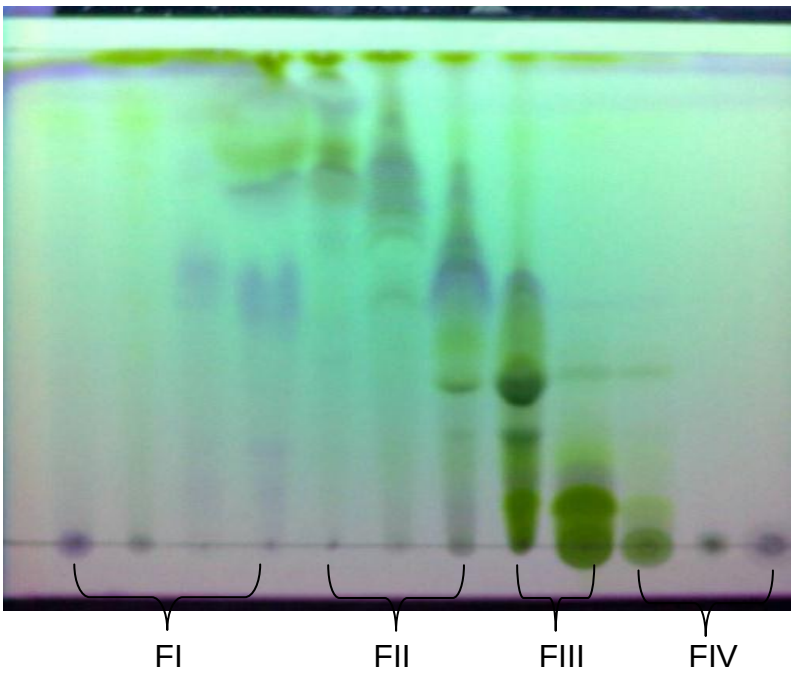
F_Ic 1%	Kontrol Positif	.303667*	.045831	.000	.14137	.46596
	Kontrol Negatif	-.072667	.045831	.840	-.23496	.08963
	F_Ia 1%	.315333*	.045831	.000	.15304	.47763
	F_Ia 0.25%	.314667*	.045831	.000	.15237	.47696
	F_Ib 1%	.050333	.045831	.979	-.11196	.21263
	F_Ib 0.25%	.080000	.045831	.759	-.08229	.24229
	F_Ic 0.25%	-.053000	.045831	.971	-.21529	.10929
	F_Id 1%	.003667	.045831	1.000	-.15863	.16596
	F_Id 0.25%	.136333	.045831	.149	-.02596	.29863

F_Ic 0.25%	Kontrol Positif	.356667*	.045831	.000	.19437	.51896
	Kontrol Negatif	-.019667	.045831	1.000	-.18196	.14263
	F_Ia 1%	.368333*	.045831	.000	.20604	.53063
	F_Ia 0.25%	.367667*	.045831	.000	.20537	.52996
	F_Ib 1%	.103333	.045831	.455	-.05896	.26563
	F_Ib 0.25%	.133000	.045831	.169	-.02929	.29529
	F_Ic 1%	.053000	.045831	.971	-.10929	.21529
	F_Id 1%	.056667	.045831	.957	-.10563	.21896
	F_Id 0.25%	.189333*	.045831	.015	.02704	.35163

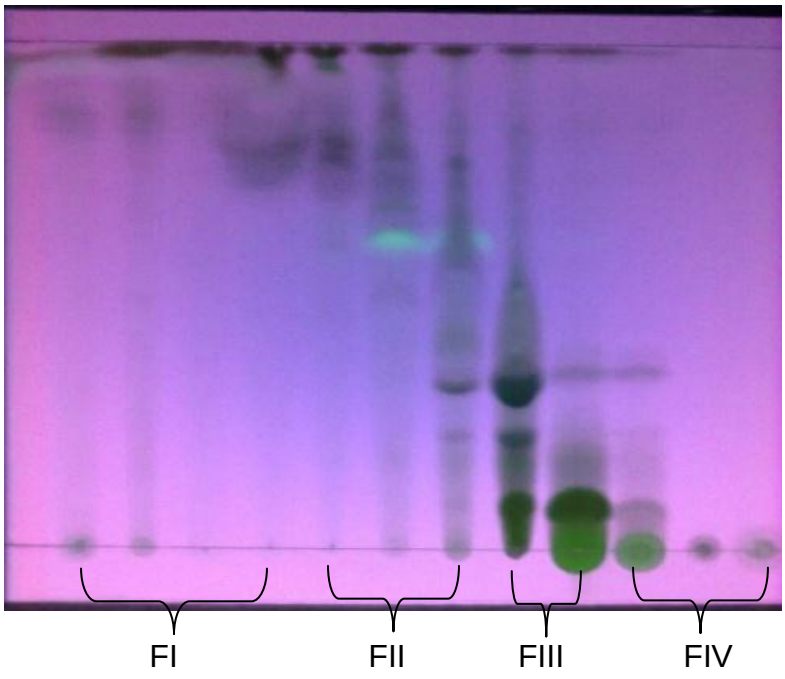
F_Id 1%	Kontrol Positif	.300000*	.045831	.000	.13771	.46229
	Kontrol Negatif	-.076333	.045831	.801	-.23863	.08596
	F_Ia 1%	.311667*	.045831	.000	.14937	.47396
	F_Ia 0.25%	.311000*	.045831	.000	.14871	.47329
	F_Ib 1%	.046667	.045831	.987	-.11563	.20896
	F_Ib 0.25%	.076333	.045831	.801	-.08596	.23863
	F_Ic 1%	-.003667	.045831	1.000	-.16596	.15863
	F_Ic 0.25%	-.056667	.045831	.957	-.21896	.10563
	F_Id 0.25%	.132667	.045831	.171	-.02963	.29496

F_Id 0.25%	Kontrol Positif	.167333*	.045831	.040	.00504	.32963
	Kontrol Negatif	-.209000*	.045831	.006	-.37129	-.04671
	F_Ia 1%	.179000*	.045831	.023	.01671	.34129
	F_Ia 0.25%	.178333*	.045831	.024	.01604	.34063
	F_Ib 1%	-.086000	.045831	.683	-.24829	.07629
	F_Ib 0.25%	-.056333	.045831	.958	-.21863	.10596
	F_Ic 1%	-.136333	.045831	.149	-.29863	.02596
	F_Ic 0.25%	-.189333*	.045831	.015	-.35163	-.02704
	F_Id 1%	-.132667	.045831	.171	-.29496	.02963
*. The mean difference is significant at the 0.05 level.						

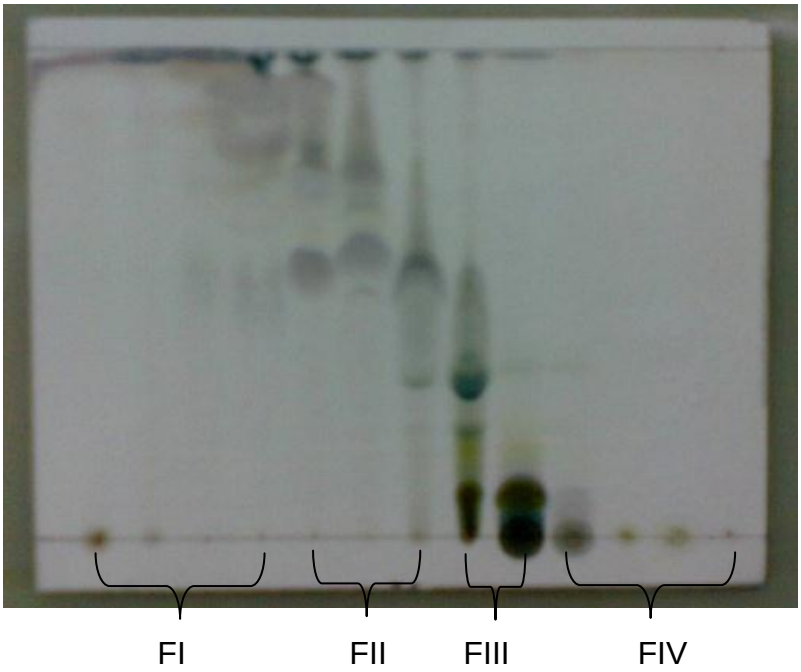
LAMPIRAN VI



(a)



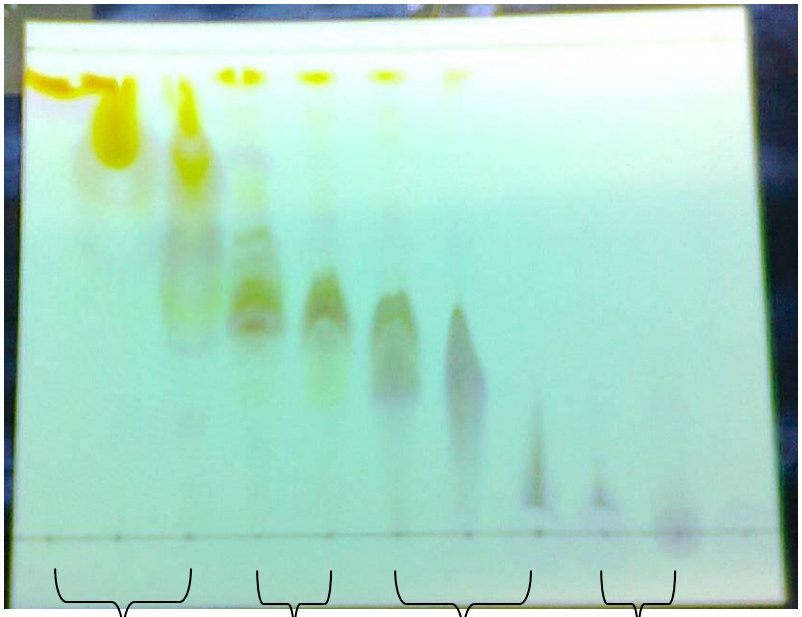
(b)



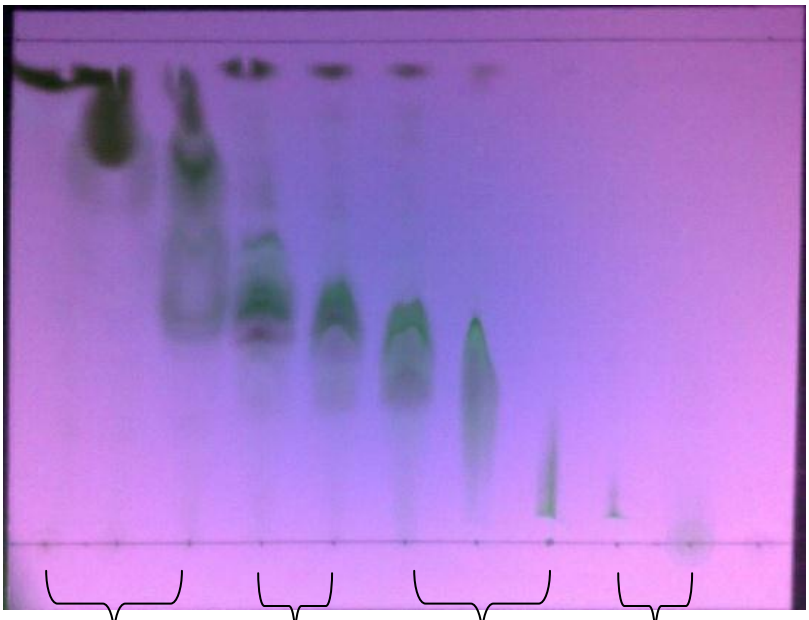
(c)

Gambar 5. Profil kromatografi lapis tipis ekstrak heksan daun pare (*Momordica charantia* L.) Keterangan: (a) Visualisasi dengan UV 254 nm, (b) visualisasi dengan UV 366 nm, (c) visualisasi setelah penyemprotan H_2SO_4 10%. Fase diam silika gel, fase gerak heksan-etilasetat 5 : 1.

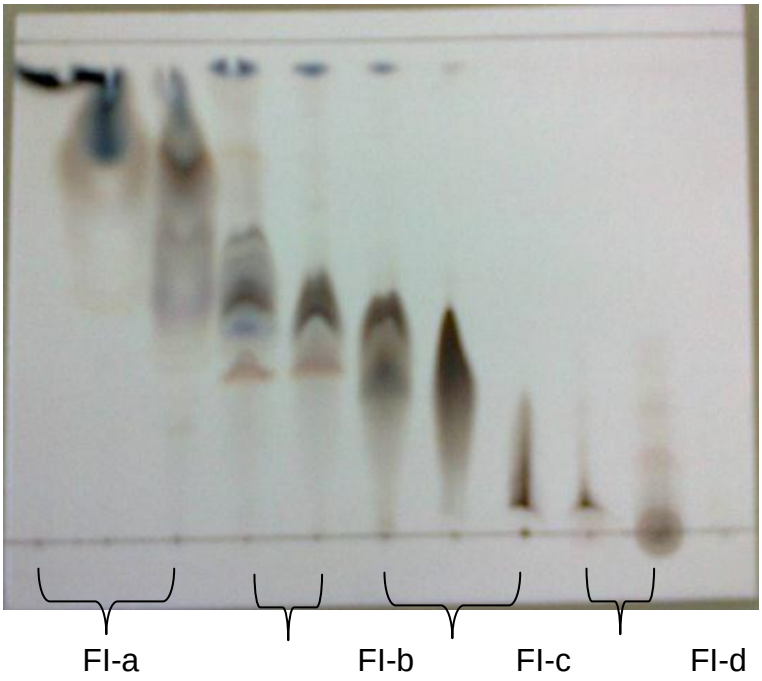
LAMPIRAN VII



(a)



(b)

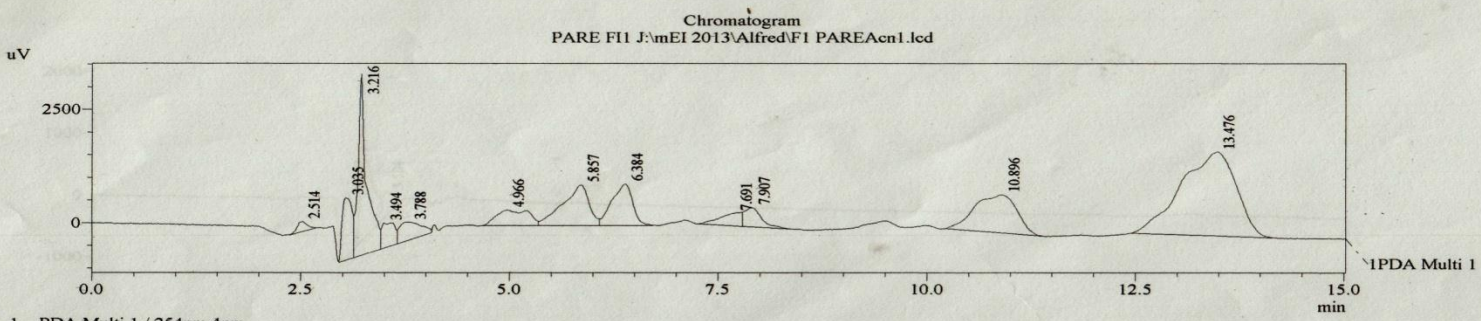


(c)

Gambar 6. Profil kromatografi lapis tipis fraksi I ekstrak heksan daun pare (*Momordica charantia* L.). Keterangan: (a) Visualisasi dengan UV 254 nm, (b) visualisasi dengan UV 366 nm, (c) visualisasi setelah penyemprotan H_2SO_4 10%. Fase diam silika gel, fase gerak heksan-etilasetat 7 : 1.

LAMPIRAN VIII

PROFIL KCKT



1 PDA Multi 1 / 254nm 4nm

Quantitative Results

PDA

ID#	Name	Ret. Time	Area	Height	Conc.
1	RT2.514	2.514	1849	219	0.000
2	RT3.035	3.035	11549	1388	0.000
3	RT3.216	3.216	28676	4010	0.000
4	RT3.494	3.494	5772	557	0.000
5	RT3.788	3.788	7235	405	0.000
6	RT4.966	4.966	9273	344	0.000
7	RT5.857	5.857	19620	892	0.000
8	RT6.384	6.384	15735	914	0.000
9	RT7.691	7.691	5385	279	0.000
10	RT7.907	7.907	5900	427	0.000
11	RT10.896	10.896	29654	839	0.000
12	RT13.476	13.476	85995	1851	0.000

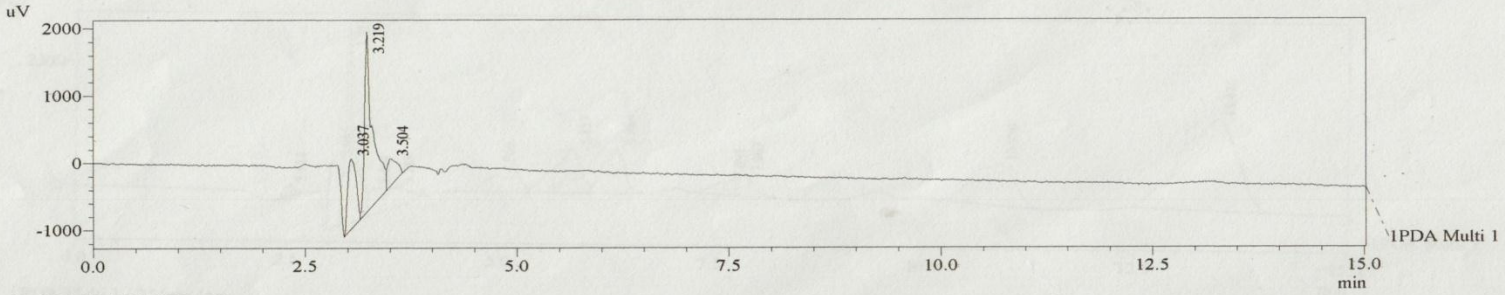
Sample Information

Acquired by	: Admin
Sample Name	: PARE FI1
Sample ID	: PARE FI1
Tray#	: 1
Vail#	: 47
Injection Volume	: 10 uL
Data Filename	: F1 PAREAcn1.lcd
Method Filename	: PAREacn 254.lcm
Batch Filename	: 24 MEI.lcb
Report Filename	: Default.lcr
Date Acquired	: 5/25/2013 4:48:44 PM
Data Processed	: 5/27/2013 12:36:25 PM

fase gerak = Acn ; Air = 80 ;20
flow rate = 0.5 ml/min
detektor : PDA
Kolom : Shim-Pack Vp-Ods
Suhu Kolom ; 40 oC
Operator : ismail

Chromatogram

PARE FI1 J:\mEI 2013\Alfred\F1 PAREAcn1.lcd



1 PDA Multi 1 / 366nm 4nm

Quantitative Results

PDA

ID#	Name	Ret. Time	Area	Height	Conc.
1	RT3.037	3.037	7174	1053	0.000
2	RT3.219	3.219	17933	2690	0.000
3	RT3.504	3.504	3107	411	0.000

Sample Information

Acquired by	: Admin
Sample Name	: PARE FI1
Sample ID	: PARE FI1
Tray#	: 1
Vail#	: 47
Injection Volume	: 10 uL
Data Filename	: F1 PAREAcn1.lcd
Method Filename	: PAREacn 366.lcm
Batch Filename	: 24 MEI.lcb
Report Filename	: Default.lcr
Date Acquired	: 5/25/2013 4:48:44 PM
Data Processed	: 5/27/2013 12:39:44 PM

fase gerak = Acn ; Air = 80 ;20
flow rate = 0.5 ml/min
detektor : PDA
Kolom : Shim-Pack Vp-Ods
Suhu Kolom ; 40 oC
Operator : ismail